

WHAT IS CLAIMED IS:

1. An actuator, comprising:
 - a housing;
 - a plunger slidably disposed in the housing, the plunger having a valve
5 element on one end;
 - a rigid valve seat member defining a valve seat configured for
engaging the valve element when the plunger is moved to a closed
configuration, wherein fluid flow through the valve seat is blocked by the
valve element; and
 - 10 a resilient support element disposed between the valve seat member
and the housing to permit lateral motion of the valve seat member relative to
a long axis of the plunger as the plunger moves to the closed configuration.
2. The actuator of Claim 1, further comprising a vehicle control system
15 in fluid communication with the actuator.
3. The actuator of Claim 1, further comprising a rigid bushing between
the housing and plunger to radially support the plunger.
4. The actuator of Claim 3, wherein the bushing contacts the valve seat
20 member to substantially prevent motion of the valve seat member along the long axis
of the plunger.
5. The actuator of Claim 4, wherein the valve seat member is
25 sandwiched between the bushing and a portion of the housing.

6. The actuator of Claim 1, wherein the valve seat member defines an outer periphery slightly spaced from the housing.
- 5 7. The actuator of Claim 1, wherein the plunger is actuated by a coil.
8. The actuator of Claim 1, wherein the valve seat is frusto-conical in shape.
- 10 9. A control system for a vehicle, comprising:
a plunger slidably supported in a valve housing; and
a valve seat configured for engaging the plunger in a closed configuration, the valve seat being permitted to move laterally with respect to the plunger as the plunger engages it, fluid flow being permitted through the valve seat to components in the control system when the plunger is in an open configuration.
- 15
10. The system of Claim 9, further comprising a vehicle supporting the housing.
- 20
11. The system of Claim 9, further comprising:
a rigid valve seat member defining the valve seat; and
a resilient support element disposed between the valve seat member and the housing to permit lateral motion of the valve seat member relative to a long axis of the plunger as the plunger moves to the closed configuration.
- 25

12. The system of Claim 11, further comprising a rigid bushing between the housing and plunger to radially support the plunger.

5 13. The system of Claim 12, wherein the bushing contacts the valve seat member to substantially prevent motion of the valve seat member along the long axis of the plunger.

14. The system of Claim 13, wherein the valve seat member is
10 sandwiched between the bushing and a portion of the housing.

15. The system of Claim 11, wherein the valve seat member defines an outer periphery slightly spaced from the housing.

15 16. A valve for a vehicle system, comprising:
a plunger;
a housing slidably supporting the plunger for movement between an open configuration and a closed configuration;
a valve seat member in the housing and defining a valve seat that is
20 blocked when the plunger is in the closed configuration and unblocked when the plunger is in the open configuration to permit fluid flow through the valve seat to the vehicle system; and
means for permitting lateral motion of the valve seat member relative to the plunger while laterally stabilizing the valve seat member.

17. The valve of Claim 16, wherein the means for permitting is a resilient support element disposed between the valve seat member and the housing.

18. The valve of Claim 17, further comprising a rigid bushing between
5 the housing and plunger to radially support the plunger.

19. The valve of Claim 18, wherein the bushing contacts the valve seat member to substantially prevent motion of the valve seat member along the long axis of the plunger.
10

20. The valve of Claim 19, wherein the valve seat member is sandwiched between the bushing and a portion of the housing.